

Please add the following new claims 8-10:

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--8. (NEW) The method for fabricating a semiconductor device of Claim 1, wherein said capacitor device is a concaved capacitor device, and wherein said lower conducting film is formed on said substrate, and on an insulating film having a recess.

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9. (NEW) The method for fabricating a semiconductor device of Claim 8, wherein said capacitor device is made of a perovskite type high dielectric constant or ferroelectric material.

10. (NEW) The method for fabricating a semiconductor device of Claim 3, wherein said capacitor device is made of a perovskite type high dielectric constant or ferroelectric material--

REMARKS

At the outset, the Examiner is thanked for the review and consideration of the present application.

The Examiner's Action dated May 8, 2002 has been received and its contents reviewed. Claims 1-3 have been amended by this amendment, and claims 8-10 have been newly added. Accordingly, Claims 1-10 are pending in the instant application, of which claims 1 and 3 are independent.

Turning now to the detailed Office Action, the Examiner has stated applicants' non-compliance with the requirements of 37 CFR 1.63(c) since the oath, declaration or application data sheet does not acknowledge the filing of any foreign application. Applicants respectfully submit that the originally filed data sheet contains the required foreign application information on page 2 of the application data sheet filed with the instant application on January 2, 2002. A copy of the application sheet consisting of two pages is enclosed for the Examiner's convenience.

Claims 1-7 are rejected under 35 U.S.C. §102(a) as anticipated by Choi et al. (U.S. Patent No. 6,168,991 - hereafter Choi). In response, Applicants have amended independent claims 1-3.

According to the amended claim 1 of the present application, a step of forming a conducting film to be formed into a lower electrode includes the sub-steps of, after depositing a lower conducting film (e.g., 15a in Fig. 1c) on a substrate by sputtering, an upper conducting film (e.g., 15b in Fig. 2A) is directly deposited on the lower conducting film (15a) by CVD, thereby forming a multi-layer film composed of the lower conducting film (15a) and the upper conducting film (15b).

Since the lower conducting film is deposited by sputtering, the morphology of the conducting film to be formed into the lower electrode is improved, and the quality of the capacitor dielectric film formed on the conducting film is also improved. Moreover, since the upper conducting film is deposited by CVD, the thickness of the conducting film to be formed into the lower electrode is uniform. Hence, during annealing for forming the capacitor dielectric film, the conducting film to be formed into the lower electrode is not easily agglomerated. Support for the amendment of claim 1 can be found in, e.g., at least in Embodiment 1, page 10, line 22 through page 11, line 8 of the specification.

On the other hand, Choi teaches, in Figs. 3-5, a method for fabricating a semiconductor device including a capacitor device composed of a first (i.e., "lower") electrode (20), a capacitor dielectric film (22) formed on the first electrode (20), and a second (i.e., "upper") electrode (26) formed on the capacitor dielectric film (22). In other words, according to Choi, the method includes the steps of forming a first conductive electrode layer 20, forming a dielectric film 22 on the first conductive electrode layer 20, and of forming a second conductive electrode layer 26 on the dielectric film 22, and wherein the first or second electrode is formed by sputtering or CVD.

The Examiner asserts that Choi teaches the forming of the lower conducting film 20 by sputtering, and the forming of the upper conducting film 26 on the lower conducting film 20 by CVD.

However, in Choi, the first conducting film 20 is formed below the capacitor dielectric film 22, and the second conducting film 26 is formed on the capacitor dielectric film 22. Hence, the lower conducting film 20 and the upper conducting film 26 is not a multi-layer film. Further, the conducting film to be formed into the lower electrode of the present invention corresponds only to the first conductive electrode 20 of Choi.

As can be seen, the conducting film to be formed into the lower electrode of the present invention is completely different from the first conducting film of Choi. As such, Choi fails to disclose a multi-layer film composed of the lower conducting film formed by sputtering and the upper conducting film formed by CVD recited in amended claim 1.

According to the amended claim 3 of the present application, a step of forming a conducting film to be formed into an upper electrode includes the sub-steps of depositing a lower conducting film on a capacitor dielectric film by sputtering, and depositing an upper conducting film directly on the lower conducting film by CVD. Hence, the conducting film to be formed into the upper electrode is made up of a multi-layer film composing the lower conducting film formed by sputtering and the upper conducting film formed by CVD.

However, the second conductive electrode 26 of Choi corresponds only to the conducting film to be formed into the upper electrode of the present invention, and is not a multi-layer film composed of the lower conducting film formed by sputtering and the upper conducting film formed by CVD as recited in amended claim 3. Therefore, the conducting film to be formed into the upper electrode of the present invention is completely different from the upper conducting film of Choi.

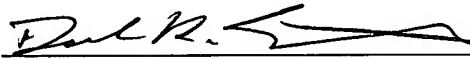
Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick, 221 USPQ 481, 485 (Fed. Cir. 1984). Choi clearly fails to disclose the method positively recited and claimed in applicants' independent claims 1 and 3 as explained above. Accordingly, the §102(a) rejection of independent claims 1 and 3 and their respective dependent claims is respectfully requested to be reconsidered and withdrawn.

New claims dependent claims 8-10 have been added to further complete the scope to which applicants are entitled. Support for new claims 8-10 can be found at least in, e.g, original claims 1 and 3.

CONCLUSION

Having responded to the rejection set forth in the outstanding non-Final Office Action, it is submitted that claims 1-7 are now in condition for allowance along with newly added claims 8-10. An early and favorable Notice of Allowance is respectfully solicited. In the event that the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, the Examiner is courteously requested to contact Applicants' undersigned representative.

Respectfully submitted,



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MARKED-UP COPY OF AMENDED CLAIMS

Please amend claims 1 and 3 as follows:

1. (Amended) A method for fabricating a semiconductor device including a [concaved] capacitor device having a lower electrode, a capacitor dielectric film [of a perovskite type high dielectric constant or ferroelectric material] formed on said lower electrode and an upper electrode formed on said capacitor dielectric film, comprising a step of:

forming a conducting film to be formed into said lower electrode including sub-steps of:

depositing a lower conducting film on a substrate by sputtering [on walls and a bottom of a recess formed in an insulating film on a substrate]; and

depositing an upper conducting film directly on said lower conducting film by CVD.

3. (Amended) A method for fabricating a semiconductor device including a capacitor device having a lower electrode, a capacitor dielectric film [of a perovskite type high dielectric constant or ferroelectric material] formed on said lower electrode and an upper electrode formed on said capacitor dielectric film, comprising a step of:

forming a conducting film to be formed into said upper electrode including sub-steps of:

depositing a lower conducting film on said capacitor dielectric film by sputtering; and
depositing an upper conducting film directly on said lower conducting film by CVD.